REMARKS

In the Final Office Action, claims 1-10 and 24 were allowed and claims 11-23 were rejected under 35 U.S.C. §102(b) as being anticipated by Accardi et al. (U.S. Patent Publication 2002/0002455, hereinafter Accardi).

Claim 11 is directed to a computer-readable storage medium storing computer-executable instructions for performing steps that include defining a random variable as a function of a signal-to-noise ratio variable. A mean for a distribution of the signal-to-noise ratio variable is determined based on the defined function. The mean is used to determine an estimate of a value for the signal-to-noise ratio variable for a frame of an observed signal.

Claim 11 is not show or suggested in Accardi. In particular, Accardi does not use a mean for a distribution of a signal-to-noise ratio variable to determine an estimate of a value for the signal-to-noise ratio variable for a frame of an observed signal. In the Final Office Action, it was asserted that Accardi determines an expected value for a distribution of an a-priori signal-to-noise ratio on page 2, EQ. 15 and paragraph 19. Further, it was asserted that this expected value is used to determine an estimate of the a-priori signal-to-noise ratio for a particular frame of an observed signal at page 2, paragraphs 20-21. Applicants respectfully dispute these assertions.

In Accardi there are two signal-to-noise ratio random variables. One is an a-priori signal-to-noise ratio random variable, ξ_k, and one is an a-posteriori signal-to-noise ratio random variable, γ_k. In EQ. 15, as denoted by paragraph 19, Accardi indicates that an estimate for the a-priori signal-to-noise ratio can be defined in terms of the a-posteriori signal-to-noise ratio random variable as the expected value of the function $\gamma_k - 1$. Note that the expected value in EQ. 15 is not the expected value of the a-priori signal-to-noise ratio. Instead, it is the expected value of the function $\gamma_k - 1$. The expected value computed in EQ. 15 may be the mean of that function, however it is not the mean of the a-priori signal-to-noise ratio random variable ξ_k. If Accardi wanted to use the mean of the a-priori signal-to-noise random variable, it would have defined it as $E[\xi_k]$. Thus, the expected value of EQ. 15 is not the expected value of the a-priori signal-to-noise ratio, but instead is the expected value of the function $\gamma_k - 1$. As a result, even if this

expected value were used in EQ. 16 to determine the a-priori signal-to-noise ratio, it would not involve using the mean of the a-priori signal-to-noise ratio, but instead would be using the mean of the function $\gamma_k - 1$.

In addition, in claim 11, the mean of the distribution of the signal-to-noise ratio variable is used to determine a value for the same signal-to-noise ratio variable. Thus, the fact that Accardi is determining an expected value of a function of the a-posteriori signal-to-noise ratio random variable, γ_k, instead of the a-priori signal-to-noise ratio random variable, ξ_k, means that Accardi is not using the mean of a signal-to-noise ratio random variable to determine a value for the same signal-to-noise ratio random variable. Instead, Accardi is calculating a value for one signal-to-noise ratio, ξ_k, based on a separate and different signal-to-noise ratio random variable, γ_k.

Further, it is noted that in EQ. 16, when Accardi actually determines an estimate for the a-priori signal-to-noise ratio, it drops the expectation operators (see paragraph 20). Thus, instead of relying on a mean of a distribution, EQ. 16 assumes that the expected value of the function $\gamma_k - 1$ will be the value of the function $\gamma_k(n) - 1$ for the current frame n if the value of that function is greater than 1 and will be equal to 0 if the value of that function is not greater than one. Thus, instead of relying on a mean of a distribution, Accardi actually either uses a calculated value based on the a-posteriori signal-to-noise ratio of the current frame or a value of 0. Note that if Accardi were actually using the mean of a distribution for the a-priori signal-to-noise ratio, Accardi would not need to test whether the value of the mean was less than zero, since it could never be less than zero. Thus, using the function $\gamma_k(n) - 1$ to determine a value for a-priori signal-to-noise ratio ξ_k is substantially different from using a mean of a distribution for a-prior signal-to-noise ratio ξ_k.

Because Accardi does not determine the expected value of the signal-to-noise ratio ξ_k and because it does not use a mean of a distribution when actually determining a value for ξ_k, Accardi does not show or suggest the invention of claim 11 or claims 12-23, which depend therefrom. As such claims 11-23 are in form for allowance.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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